B1 Cancel'd.

extending both axially along the surface of the shaft and radially along both surfaces 24, 26 of the thrust plate to enhance the radial and axial stability of the system. The fluid (not shown) of the system is maintained in the reservoir 30 inside the central shaft 10, and circulates over the surfaces and through the gap between the shaft 10 and the sleeve 12 as well as the thrust plate surface 26 and the sleeve 12 and the thrust plate surface 24 and the counterplate 32. In order to prevent any loss of fluid from the gap, it must not be allowed to escape between the upright portion 40 of the sleeve and the facing surface of the counterplate 32. For this reason, the prior art has proposed and utilized a o-ring 42 which rests in a groove 44 in the surface of the sleeve facing the counterplate 32. However, this approach requires both the expense of forming the groove 44 in the sleeve, as well as the cost of the o-ring 42 and the equipment time to insert the o-ring 42 in the groove. Further, in order to maintain the compression of the o-ring and diminish the possibility of fluid escaping, in addition to the counterplate facing the o-ring, a further washer 50 must be used and held in plate against the counterplate.

Please replace paragraph 5 at page 4, beginning at line ~~25~~ 26, through page 5, line 18 with the following:

B2

FIG. 2 shows a design which in contrast to FIG. 1 is a rotating shaft 100 as the shaft is integrated with the hub 102 which carries flange 104 which functions as a disc support surface. The shaft with the hub 102 supports a magnet 103 on its inner axial surface, facing stator 106 whose energization causes stable rotation of the hub. The stator in turn is supported on a axial extension 108 of base casting 110. A sleeve 112 which supports the shaft 100 and its associated thrust plate 116 is incorporated into the axial extension 108 of the base 110. This sleeve 112 has axial surface 120 that faces a surface of the shaft. These two surfaces define a journal bearing which is of standard design and not further shown. Further, the thrust plate at surfaces 122 and 124 define in cooperation with the sleeve 112 and the counterplate 130 thrust bearings of the fluid dynamic type which further support the shaft against both axial and radial forces. Each of these journals and thrust bearings require fluid in the gap between the facing surfaces. This fluid may either recirculate through an internal channel 134 which either passes through the thrust plate or between the thrust plate and shaft, or return through a central reservoir or the like such as

B2 cancel

the reservoir 30 shown in FIG. 1. In either case, a primary cause for concern is with the old design of FIG. 1 is to prevent the escape of any fluid between the surface 140 of the sleeve and the complementary surface 142 of the thrust plate. To avoid this loss, while enhancing the simplicity of the design, a laser weld 150 has been applied at the junction at the axially outer edge of the counterplate 130 and the sleeve 112. This laser weld is applied using well-known techniques and technology but by its very simplicity enhances the reliability.

The Commissioner is authorized to charge any additional fees to Deposit Account No. 20-0782 (Order No. 803279701/JAS).

Respectfully submitted,

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